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Donald F. Gordon

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EXAMINER

HOYE, MICHAEL W

ART UNIT

PAPER NUMBER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/640,966	<b>Applicant(s)</b> GORDON ET AL.	
	<b>Examiner</b> Michael W. Hoyer	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 39-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicants' arguments filed on March 22, 2007 have been fully considered but they are not persuasive.

Regarding the Ellis reference, the Applicants argue on page 7 that, "Ellis fails to teach, show or suggest slice based encoding. The Examiner concedes this in the Office Action dated July 31, 2006. (See p. 4, ll. 10-11.)"

As previously stated, "the Examiner respectfully notes that the Ellis reference was not relied on to teach slice encoding and was used primarily to provide teaching regarding encoding a music interface in an interactive program guide."

Regarding the Zdepski reference, as related to amended independent claims 39 and 48, the Applicants argue on page 7 that, "Zdepski also fails to teach slice-based encoding."

In response, the Examiner respectfully disagrees with the Applicants because, as previously stated, Zdepski clearly discloses "slice-based encoding" as described throughout the reference. Also, as previously stated, the claimed regions "using slice-based encoding" or sliced-encoded regions are the same as the encoded slices which may be inserted or overlaid on the background picture as disclosed in the Zdepski reference. Zdepski specifically states that, "the MPEG standard defines a slice as a contiguous sequence of 2 or more macroblocks (16x16 pixel blocks) that begin and end on the same row of macroblocks" (see Fig. 4A for example), alternatively, the same picture can be encoded with the slice structure as shown in Fig. 4B (see col. 2, lines 30-39 and col. 10, line 66 – col. 11, line 36). Therefore, according to the MPEG

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standard, slices are made up of pixel blocks. In addition to, Zdepski further discloses that the insert picture or overlay slices may comprise images or pictures representing portions of a GUI or a display portion of the GUI, including audiovisual content or programming (col. 4, line 51 – col. 5, line 18). The “display portion of the GUI” may include one or all of the displayable elements of a GUI, such as buttons, dials, knobs, slider bars, text boxes, switches, numeric values, graphs, charts or other types of GUI elements or controls/indicators, which form part of all of a user interface (col. 5, lines 2-6). Furthermore, the “display portion of the GUI” is also intended to include both GUI input elements, for receiving input from a user, and GUI output elements, for display information to a user (col. 5, lines 7-10). Therefore, the regions or slices disclosed by Zdepski may include functional regions such as those found in an interactive program guide (IPG).

The Applicants further argue in the second full paragraph on page 7 that, “even if the Examiner maintains the broad interpretation of Zdepski...Zdepski clearly does not teach or suggest combining the slice-based encoded music channel listing region, header region and music channel description region in an order to be decoded before transmission to the STT for display and then recombining slice-encoded packets of data or the regions in the order they arrive.”

In response, the Examiner respectfully disagrees with the Applicants because Zdepski specifically states beginning on line 66 of col. 13 that, “...the decoder 304 decodes the received slices in the order that they are provided to the decoder 304”, and the Examiner respectfully asks in view of the amended claim language if the decoder of Zdepski does not decode in the order in which each slice arrives?

The Applicants argue in the third full paragraph on page 7 that, “pasting one picture into another is not the same as the claimed slice encoding of different regions that form a music interface, because no pasting is done. Specifically, each region is separately slice-encoded at the headend and then recombined to form the music interface for display at the set top terminal...”

In response, the Examiner respectfully disagrees with the Applicants because each region is separately slice-encoded at the headend, as described above, and the regions are recombined in the order in which each slice/region is received and then displayed in order to create various types of GUIs (col. 13, line 66 – col. 14, line 19 and col. 4, line 59 – col. 5, line 10).

The Applicants argue in the last paragraph on page 7 that, “the division of frames into a grid of squares in Zdepski is different than the claimed slice-encoded regions, because regions are functional (e.g., music channel listing region, header region, music channel description region) while the grid is passed on pixels.”

In response, the Examiner respectfully disagrees with the Applicants because, as previously stated above, Zdepski further discloses that the insert picture or overlay slices may comprise images or pictures representing portions of a GUI or a display portion of the GUI, including audiovisual content or programming (col. 4, line 51 – col. 5, line 18). The “display portion of the GUI” may include one or all of the displayable elements of a GUI, such as buttons, dials, knobs, slider bars, text boxes, switches, numeric values, graphs, charts or other types of GUI elements or controls/indicators, which form part of all of a user interface (col. 5, lines 2-6). Furthermore, the “display portion of the GUI” is also intended to include both GUI input elements, for receiving input from a user, and GUI output elements, for display information to a

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user (col. 5, lines 7-10). Therefore, the regions or slices disclosed by Zdepski may include functional regions such as those found in an interactive program guide (IPG).

The Applicants further argue on page 8 that, “Zdepski also fails to teach or suggest that different regions ay be slice-encoded separately.”

In response, the Examiner respectfully disagrees with the Applicants in view of the response given above where portions of the GUI may be slice-encoded separately.

The Applicants also argue in the middle of page 8 that, “Zdepski requires the use of slice maps to determine the location of where the compressed insert pictures are to be “pasted”.” Then the Applicants appear to mention the Examiner’s rebuttal as described in col. 13, lines 45-59 and col. 13, line 66 – col. 14, line 18, where Zdepski discloses that, “the subscriber television determines the location of the replacement slices if the video delivery system does not provide a background picture slice map.” However, the Applicants further argue that, “this does not teach or suggest recombining slice-encode packets of data or the regions in the order they arrive.” The Applicants restate this argument on the last line of page 8 through the top of page 9, which states, “In other words, Zdepski teaches that the ordering is performed at the subscriber television (i.e. set top terminal) and the decoder decodes the received slices in the order they are provided to the decoder from the ordering performed by the subscriber television (i.e. set top terminal).”

In response, the Examiner respectfully disagrees with the Applicants because the Applicants’ originally filed Specification on page 47 describes the use of “slice-based encoding techniques” as related to a music interface in an interactive program guide (IPG), where beginning on line 26:

In a similar manner, the channel rows in the music channel listing can be encoded as slices using the slice-based encoding techniques.

Again a number of PIDs can be used to send the music channel slices to the STT. The decoder can then generate the music interface page by retrieving the necessary PIDs and manipulating the slice-start codes of the music channels slices so that these slices can be appropriately reassembled (and possibly with the video slices) to generate the desired music interface page.

Beginning on line 15 of page 47, the Applicants' Specification also states that:

Each video slice can then be sent as a separate stream (i.e., a separate PID). When directed, the decoder at the STT can retrieve and process the PIDs for the video slices and reassembles the slices to generate the video. The decoder can also generate the video at the desired location of the music interface page (e.g., the left display region 3820a or the right display -region 3820b) by manipulating the slice-start codes of the video slices.

The PIDs for the video slices can be appropriately identified in a program map table related to the music channel number. For each music channel number, a distinct video clip, video, still images, banners can be associated and identified with a unique PID number. As the Viewer selects a music channel, the decoder can retrieve the associated video PID.

Therefore, according to the Applicants' specification as related to the music interface, the channel rows and other regions that are encoded as slices appear to be sent as separate streams or PIDs and the decoder can generate the music interface page by retrieving the necessary PIDs and manipulating the slice-start codes of the video, music channel, or other region slices so that the slices can be appropriately reassembled to generate the desired music interface page. Similarly, Zdepski discloses using slice maps and listings of byte offsets of the respective slices, or other processing to locate the slices (see col. 13, lines 38-55). The Examiner respectfully requests that the Applicants provide further detail from specific portions of the Specification and clarify the language of the claims in attempt to overcome or distinguish from the prior art of record, specifically the Zdepski reference.

Regarding dependent claims 45 and 54, the Applicants argue that the Examiner has failed to properly establish Official Notice has required the Examiner to support his findings with adequate evidence.

In response, the Examiner respectfully disagrees with the Applicants because the Boucher et al (USPN 6,675,387) reference, which was previously cited by the Examiner, clearly teaches the claimed “background strips encoded at the headend to generate a bitmap to be sent to the STT” as described in the Abstract and throughout the specification. Therefore, it would have been obvious to one of ordinary skill in the art to have combined the Zdepski reference with the additional teachings of the Boucher reference which provides a background with background strips encoded at the headend and generates a bitmap to be sent to the client or set top terminal, since it is notoriously well known in the art of interactive program guides to use bitmaps for the transmission and display of GUI images for the advantage of using a well-known standard display format which is easily portable between different platforms, and may be easily compressed and processed using MPEG processing. Therefore, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to have used “bitmaps” for the advantage given above.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



3. Claims 39-44, 47-53 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al (US 2004/0117831), in view of Zdepski et al (USPN 6,606,746), both cited by the Examiner.

As to claim 39, note the Ellis et al reference which discloses a method for encoding a music interface in an interactive program guide (IPG) (see pg. 7 [0117]-[0119]). The claimed “encoding a plurality of music channel rows using slice-based encoding and transmission at a headend for recombination at a set top terminal (STT) for display in a music channel listing region” is met in part by Figures 53A and 53B of Ellis et al where a plurality of music channel rows (see 636 in Fig. 53A and 641 in Fig. 53B) are encoded and transmitted from the headend and combined at a set top terminal for display in a music channel listing as shown in the Figures (also see pg. 7 [0117]-[0119] and pg. 20 [0219] – pg. 21 [0224]). Ellis et al does not explicitly disclose the claimed encoding...using **slice-based encoding**. However, the Zdepski et al reference teaches an interactive television system and method for displaying a graphical user interface using insert pictures or slices using slice-based encoding. Zdepski et al notes that the MPEG standard defines a slice as a contiguous sequence of 2 or more macroblocks (16x16 pixel blocks) that begin and end on the same row of macroblocks (see col. 2, lines 30-39 and col. 10, line 66 – col. 11, line 36). Zdepski further teaches a graphical user interface (GUI) in an interactive television system that provides a compressed background picture (encoded guide graphics portion) which comprises a plurality of slices, and one or more compressed insert pictures (video portion) which comprise one or more slices (see col. 2, line 42 – col. 3, line 33 and col. 4, line 51 – col. 5, line 18). More specifically, Zdepski teaches in col. 4, line 51 – col. 5, line 18 that the insert picture or overlay slices may comprise images or pictures representing

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portions of a GUI or a display portion of the GUI, including audiovisual content or programming. The “display portion of the GUI” may include one or all of the displayable elements of a GUI, such as buttons, dials, knobs, slider bars, text boxes, switches, numeric values, graphs, charts or other types of GUI elements or controls/indicators, which form part of all of a user interface (col. 5, lines 2-6). In addition to, the “display portion of the GUI” is also intended to include both GUI input elements, for receiving input from a user, and GUI output elements, for display information to a user (col. 5, lines 7-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the encoding of a music interface in an IPG of the Ellis et al reference with the Zdepski et al reference, which further teaches encoding video as slices using slice-based encoding for the advantages of saving transmission bandwidth, data processing, and data storage, since video data updates are smaller in size. One of ordinary skill in the art would have been led to make such a modification since using slice-based encoding provides additional efficiency for transmitting and processing video data as described above. The claimed “encoding a header region using slice-based encoding and transmission at the headend for recombination at the STT for display” is met in part by Ellis et al which discloses a header region “MUSIC CHANNELS” (see Fig. 53A) or “MUSIC VIDEO CHANNELS” (see Fig. 53B) as shown and described above. The “slice-based encoding” is met by the combination of Ellis and Zdepski as described above. The claimed “encoding a music channel description region using slice-based encoding and transmission at the headend for recombination at the STT for display” is met in part by Figures 53A and 53B of Ellis et al, as previously described above, where a plurality of music channel rows with a music channel description region (see 636 in Fig. 53A and 641 in Fig. 53B) are encoded and

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transmitted from the headend and combined at a set top terminal for display in a music channel listing as shown in the Figures (also see pg. 7 [0117]-[0119] and pg. 20 [0219] – pg. 21 [0224]). The “slice-based encoding” is met by the combination of Ellis and Zdepski as described above. The claimed “combining the slice-based encoded music channel listing region, header region and music channel description region in an order to be decoded before transmission to the STT for display” is met by the combination of Ellis and Zdepski, as described above, where Zdepski the background picture and insert picture slices are transmitted set top box and the CPU 314 provides the slices to the decoder in the correct order (see col. 13, line 38 – col. 14, line 18, also see col. 13, lines 1-22). The claimed “wherein the music interface for display on the STT includes the music channel listing region, the header region, and the music channel description region” is met by Figures 53A and 53B of Ellis et al as described above. The claimed “recombined [slice-encoded packets of data or the regions] in the order they arrive” is met by the Zdepski reference which clearly teaches in col. 13, lines 45-49 that, “Where the video delivery system does not provide a background picture slice map and an insert picture slice map, then the subscriber television determines the location of the replacement slices comprised in the compressed background picture prior to the pasting.” In addition to, Zdepski further teaches that, “[T]he decoder 304 decodes the received slices in the order that they are provided to the decoder 304.” (See col. 13, line 66 – col. 14, line 18.)

As to claim 40, the claimed “encoding a plurality of audio streams for tuning at the STT, each audio stream associated with a music channel” is met by the music or audio channels of Ellis et al as described above (see pg. 7 [0117]-[0119] and pg. 20 [0219] – pg. 21 [0224]).

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As to claim 41, the claimed “encoding a video region using slice-based encoding and transmission at the headend for recombination at the STT for display” is met in part by the “ALBUM COVER” video region 105 in Fig. 53A or the “MUSIC VIDEO” video region 105 in Fig. 53B of Ellis et al, and the “slice-based encoding...” is met by the combination of Ellis and Zdepski as described above.

As to claim 42, the claimed “wherein the music channel listing region includes a left display region and a right display region” is met by Figs. 53A-53B of Ellis, where the claimed “left display region” is met by channel listing 636 (Fig. 53A) or 641 (Fig. 53B), and the claimed “right display region” is met by the album cover video display window 105 (Fig. 53A) or the music video region 105 (Fig. 53B). In addition to, the Examiner notes that GUI display regions are merely a matter of design choice and may be implemented in various different ways as determined by the programmer or GUI designer.

As to claim 43, the claimed “wherein the right display region is the video region” is met by the Ellis et al reference as described above in claim 42.

As to claim 44, the claimed “wherein the header region is pre-loaded to a local memory of the STT” is met by Ellis et al as described on page 5 [0101], page 7 [0117], and page 21 [0223] (also see Fig. 1A) where IPG or GUI information, including the “header region” may be pre-stored in local memory of the set-top box 26.

As to claim 47, the claimed “wherein the music interface is sent via one transmission channel” is met by col. 7, lines 5-50). Also see pg. 21 [0221]-[0224] of the Ellis et al reference where the interface may be sent via one transmission channel.

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As to claims 48-53 and 55-56, the claims are met based on similar grounds as the rejection of claims 39-44 and 46-47 as described above.

4. Claims 45-46 and 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al (US 2004/0117831), in view of Zdepski et al (USPN 6,606,746), and in further view of Boucher et al (USPN 6,675,387), all cited by the Examiner.

As to claim 45, the claimed “wherein the music channel listing region includes a background having background strips encoded at the headend to generate a bitmap to be sent to the STT” is met in part by the combination of Ellis et al and Zdepski et al as described above. Zdepski teaches encoding background strips or slices at the headend and transmitting the slice structure for insertion at the set top box 140 (see col. 6, lines 43 – col. 7, line 21 and col. 11, lines 23-36 for example). Zdepski does not explicitly use the term “bitmap” but does describe the use of bit streams and slice maps as described in the sections cited above. However, the Boucher et al (USPN 6,675,387) reference, clearly teaches the claimed “background strips encoded at the headend to generate a bitmap to be sent to the STT” as described in the Abstract and throughout the specification. Therefore, it would have been obvious to one of ordinary skill in the art to have combined the Ellis et al and Zdepski et al references with the additional teachings of the Boucher reference which provides a background with background strips encoded at the headend and generates a bitmap to be sent to the client or set top terminal, since it is notoriously well known in the art of interactive program guides to use bitmaps for the transmission and display of GUI images for the advantage of using a well-known standard display format which is easily portable between different platforms, and may be easily compressed and processed using MPEG

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processing. Therefore, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to have used “bitmaps” for the advantage given above.

As to claim 46, the claimed “wherein the background strips are stored in a local memory of the STT” is met by Ellis et al as described on page 5 [0101], page 7 [0117], and page 21 [0223] (also see Fig. 1A) where IPG or GUI information, including the “background strips” may be pre-stored in local memory of the set-top box 26.

As to claims 54-55, the claims are met based on similar grounds as the rejection of claims 45-46 as described above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael W. Hoye whose telephone number is **571-272-7346**.

The examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at **571-272-7353**.

**Any response to this action should be mailed to:**

Please address mail to be delivered by the United States Postal Service (USPS) as follows:

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

Michael W. Hoyer  
June 8, 2007

  
**ANDREW Y. KOENIG**  
**PRIMARY PATENT EXAMINER**